MULTIMEDIA UNIVERSITY

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

# FINAL EXAMINATION

**TRIMESTER 1, 2022/2023 (TERM ID 2215)**

## DEC5614 – INTRODUCTORY MICROECONOMICS

(All sections/Groups)

13 FEBRUARY 2023
9.00 A.M – 11.00 A.M
(2 Hours)

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## INSTRUCTIONS TO STUDENT

1. This question paper consists of 5 pages.
2. Attempt **ALL** questions. The distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

## QUESTION 1

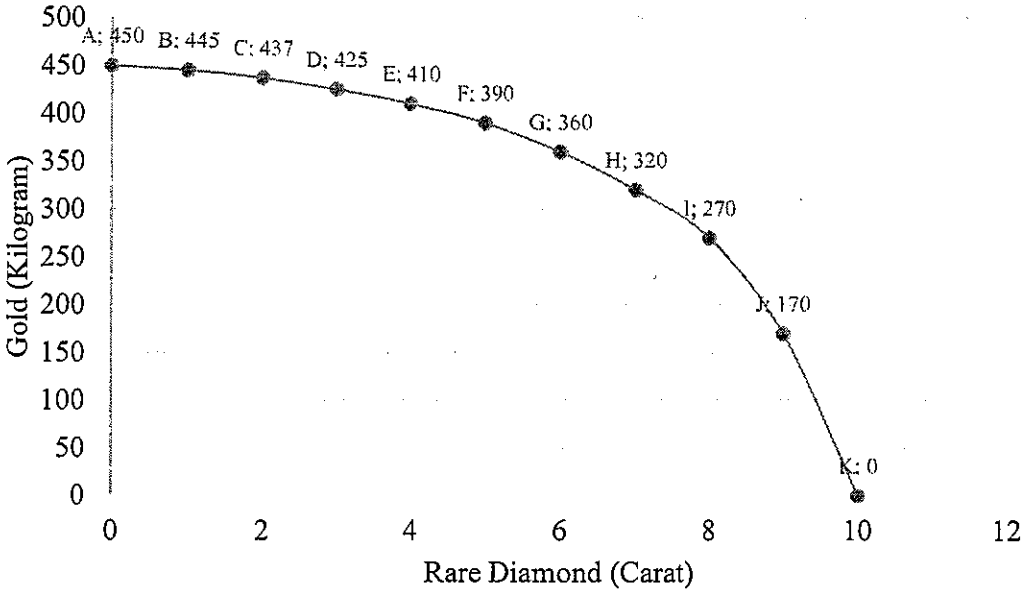


Diagram above shows a production possibilities frontier (PPF) for Factory K, a small diamond and gold miner. Answer the following questions:

(a) Identify the production combination for the factory at every level of production. Complete Table 1 below. (5 marks)
*(You are required to draw and complete the table below in your answer booklet)*

| Production Level | Gold | Rare Diamond |
|---|---|---|
| A | | |
| B | 1 | 445 |
| C | | 437 |
| D | | 425 |
| E | 4 | |
| F | 5 | 390 |
| G | | |
| H | 7 | |
| I | | 270 |
| J | 9 | 170 |
| K | | 0 |

Table 1

(b) Identify the opportunity cost of producing **ONE (1)** kilogram of gold at every level of production. Complete Table 2 below. (5 marks)
*(You are required to draw and complete the table below in your answer booklet)*

| **Production Level** | **Factory K's Opportunity Cost of Producing ONE (1) Kg of Gold** |
|---|---|
| Point A to B | |
| Point B to C | |
| Point C to D | |
| Point D to E | |
| Point E to F | |
| Point F to G | |
| Point G to H | |
| Point H to I | |
| Point I to J | |
| Point J to K | |

Table 2

(c) Define opportunity cost. Explain the concept of opportunity cost on the production possibilities frontier (PPF). (4 marks)

(d) List and explain **FOUR (4)** factors of production with appropriate example from Factory K's producing gold. (16 marks)

(Total: 30 marks)

**Continued ...**

## QUESTION 2

| Consumption Possibilities | Canned Fish | Milk |
|---|---|---|
| A | 28 | 0 |
| B | 24 | 6 |
| C | 20 | 12 |
| D | 16 | 18 |
| E | 12 | 24 |
| F | 0 | 42 |

Table 3

Elly owns a cat named Lucky. Her cat only consumes two goods: Canned Fish and Milk. Elly allocated RM252 per week to buy her cat these two goods. One canned fish costs RM9 and one pack of milk costs RM6.

(a) Based on the information above, determine the budget equation for the cat's consumption. (2 marks)

(b) Graph this budget line where Milk (M) is measured on y-axis and Canned Fish (CF) is measured on the x-axis. (8 marks)

(c) Given this additional information, complete Table 4 below and identify the cat's utility maximizing choice at this budget constrain. (11 marks)
*(You are required to draw and complete the table below in your answer booklet)*

| Consumption Possibilities | Canned Fish ($9) | | | | Milk ($6) | | | |
|---|---|---|---|---|---|---|---|---|
| | Quantity (per week) | Total Utility | MU | MU/P | MU/P | MU | Total Utility | Quantity (per week) |
| A | 28 | 180 | | | - | - | 0 | 0 |
| B | 24 | 170 | | | | | 30 | 6 |
| C | 20 | 140 | | | | | 36 | 12 |
| D | 16 | 102 | | | | | 40 | 18 |
| E | 12 | 40 | | | | | 43 | 24 |
| F | 0 | 0 | - | - | | | 44 | 42 |

Table 4

(d) Define the marginal rate of substitution. Determine the MRS if Lucky is willingly to give up 42 Milk in a week to get 28 of Canned Fish. (4 marks)

(Total: 25 marks)

**Continued ...**

## QUESTION 3

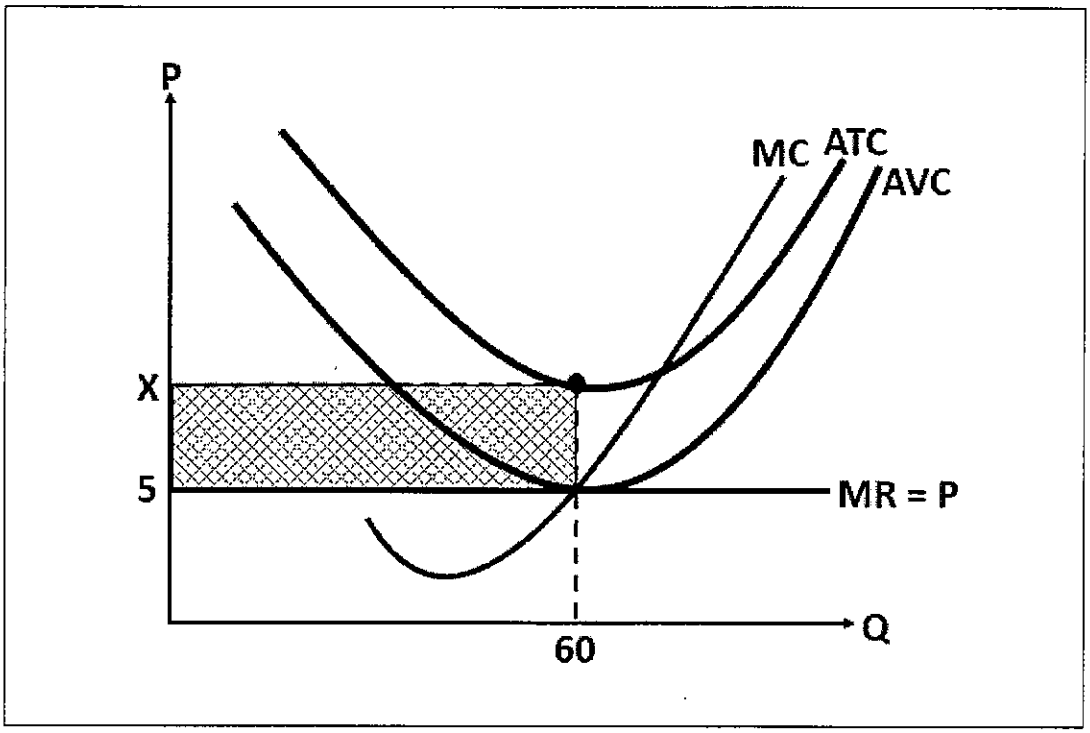


Figure 1

(a) Based on the profit maximizing output given in Figure 1;

(i) Find the total revenue. (3 marks)

(ii) Find the total variable cost. (3 marks)

(iii) Find the value of X if the firm is experiencing a loss of RM 300. (4 marks)

(iv) Define shutdown point. Explain the option for the firm for this condition in the market. (5 marks)

(v) An increase in demand moved the market equilibrium price to RM20 per unit for the firm. Assuming the firm is selling at the same output, calculate the new profit. (3 marks)

(vi) What is the type of market structure for this firm? Justify your answer. (2 marks)

(Total: 20 marks)

**Continued ...**

## QUESTION 4

Table 5 below shows the labor productivity of a firm producing candy cane. Assume that the firm is experiencing a short-run technological constraint.

(a) Calculate the firm's average product and marginal product at every level of production. Complete Table 5 for the average product and marginal product. (11 marks)

(b) Supposed the firm is selling the candy cane for RM5 per piece. Calculate the value of marginal product at every year. (5 marks)
*(Student is required to copy this table and fill in the answer in the table).*

| Year | Quantity of Labor ($L_Q$) | Total Product (TP) | Average Product (AP) | Marginal Product (MP) | Value of Marginal Product (VMP) |
|---|---|---|---|---|---|
| **A** | 1 | 56 | | - | - |
| **B** | 2 | 75 | | | |
| **C** | 3 | 90 | | | |
| **D** | 4 | 98 | | | |
| **E** | 5 | 104 | | | |
| **F** | 6 | 108 | | | |

Table 5

(c) What is the firm's profit maximizing labor if the wage rate is RM40 per hour? Explain. (4 marks)

(d) New technology has helped the firm to reduce the cost of using capital relative to wage rate. Explain what happen to the firm's labor demand in this situation. (5 marks)

(Total marks: 25 marks)

**End of Paper**